

CLAIMS:

1. A High Performance drum brake assembly for automotive braking system, wherein, the said drum brake assembly envisages incorporation of means in the unutilized space on the leading shoe near the wheel cylinder by which it can deliver an enhanced brake output torque as compared to the conventional drum brake design.
2. A High Performance drum brake assembly for automotive braking system, wherein, as claimed in claim-1, the utilization of space by employing an additional lever arrangement and connected in such a way to the existing lined leading shoe in order to increase the brake output torque.
3. A High Performance drum brake assembly for automotive braking system, wherein, as claimed in claim-1, the brake assembly has a new lever pivoted on the leading shoe web rests on wheel cylinder piston end and the other end being connected to the strut assembly, such that the lever, touches the piston instead of the lined leading shoe web.
4. A High Performance drum brake assembly for automotive braking system, wherein, as claimed in claim-1, comprising of a backplate, lined leading shoe, lined trailing shoe, shoe return springs, handbrake lever and shoe hold down springs wherein the invention is characterized in the incorporation of a new lever, can deliver an output brake torque higher to that compared with a conventional drum brake assembly without necessitating a bigger diameter wheel cylinder or brake diameter.

5. High Performance drum brake assembly, as claimed in claim-1, wherein the wheel cylinder is fixed to the backplate with the help of mounting screws; the lined shoe assemblies are held to the backplate with the shoe hold springs; which are held together with the help of shoe return springs being assembled as in the conventional drum brake characterized in the incorporation of additional lever pivoted on the leading shoe web.
6. A High Performance drum brake assembly, as claimed in claim-1, wherein, upon actuating the wheel cylinder assembly, the lever rotates about its pivot point and pushes the strut assembly with the trailing shoe receiving two inputs, one from the wheel cylinder assembly and the other from the strut assembly, which is mechanically actuated by the new lever. The wheel cylinder input and the strut reaction force together acting on the pivot, results in almost twice the force acting on the leading shoe.
7. A High Performance drum brake assembly, as claimed in claim-2, wherein a low friction lining can be had due to the increased output given by the brake assembly through which a host of issues such as maintaining lining performance consistency, grabbing, high fade, noise, early morning sharpness can be easily addressed.
8. A High Performance drum brake assembly, as claimed in claim-3, wherein the increase in output brake torque is obtained without increasing the brake diameter and hence packaging the brake in the available wheel size can be achieved.

9. A High Performance drum brake assembly, as claimed in any of the claims 1 to 4, wherein incorporation of the high performance drum brake assembly in place of a conventional brake can result in material savings and hence savings in cost as the new design can deliver the same output brake torque with a smaller diameter wheel cylinder.
10. A High Performance drum brake assembly, as claimed in claim-5, wherein incorporation of the brake will result in reduced hydraulic pressure requirement, thus reducing the pedal effort requirements and meeting regulatory requirements comfortably.
11. A High Performance drum brake assembly, as claimed in claim-6, wherein this brake gives the advantage of having a substantial linear boost of output brake torque for a given hydraulic pressure input.
12. A High Performance drum brake assembly for automotive braking system as substantially described herein with reference to the accompanying drawings.